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(54)	CASTABLE THREE-DIMENSIONAL		
	STATIONARY PHASE FOR ELECTRIC		
	FIELD-DRIVEN APPLICATIONS		

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Related U.S. Application Data

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(51)) Int. Cl. ⁷	 C01N 27/447
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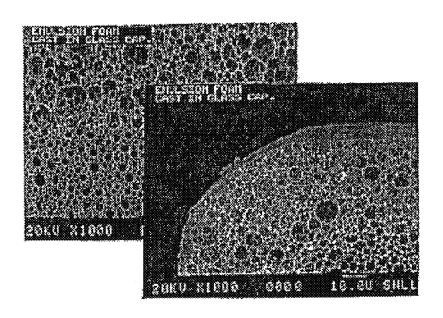
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(57) ABSTRACT

A polymer material useful as the porous dielectric medium for microfluidic devices generally and electrokinetic pumps in particular. The polymer material is produced from an inverse (water-in-oil) emulsion that creates a 3-dimensional network characterized by small pores and high internal volume, characteristics that are particularly desirable for the dielectric medium for electrokinetic pumps. Further, the material can be cast-to-shape inside a microchannel. The use of bifunctional monomers provides for charge density within the polymer structure sufficient to support electroosmotic flow. The 3-dimensional polymeric material can also be covalently bound to the channel walls thereby making it suitable for high-pressure applications.

12 Claims, 1 Drawing Sheet



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